



Hardware specifications for Cadcorp SIS 9 software

Cadcorp provides the following information as a guide for minimum and recommended hardware for:

- Desktop PCs running Cadcorp SIS Desktop or Desktop Express
- Servers running GeognoSIS or GeognoSIS Express

All Cadcorp products are supplied in 32-bit and 64-bit versions. Cadcorp recommends that wherever possible, the appropriate architecture version matches the operating system.

SIS Desktop and Desktop Express - *MINIMUM*

Operating system:	Windows® 7 or above
Processor:	8th Generation Intel® Dual Core i5 processor
Memory:	8 GB
Disk - Installation:	4 GB for software installation
Disk – Data:	100GB 7200 RPM SATA 6Gb/s (dependent on local storage)

SIS Desktop and Desktop Express - *RECOMMENDED*

Operating system:	Windows® 10 (64-bit)
Processor:	9th Generation Intel® Dual Core i9 processor
Memory:	12 GB
Disk - Installation:	4 GB for software installation
Disk – Data:	100GB Solid State Drive (dependent on local data storage)
Graphics Card:	ASUS Radeon RX 560 4GB

Additional Information

- Additional processor power will be required if performing a large number of queries and other processing tasks. Generally, it is advantageous to use the most powerful processors with as much memory as possible on 64-bit architecture.
- SIS 9 utilises multi-threading support for some operations across multiple cores or processors.
- The minimum specification does not include a graphics card. PCs with on-board and low specification graphics cards should ensure that Map Drawing Engine is set to 'Simple' under Options - Drawing and Printing.
- The recommended specification includes a high specification graphics card. PCs using such graphics cards should ensure that Map Drawing Engine is set to 'Hardware accelerated' under Options - Drawing and Printing.
- Additional disk space will be required if storing data locally and SSD is recommended.
- Some datasets can use large amounts of memory. These include internal datasets, BDS files, some raster formats and point data not held in a spatial database.
- If the Cadcorp OS MasterMap Manager will be run on this device, this can require up to 200GB (for a national load) of temporary space to process the data for loading into the database.

Network Licence Server

Concurrent licencing requires a network licence server to be installed onto a network accessible machine, ideally with a fixed IP address. All PC's which use Cadcorp SIS Desktop will need access to this network licence server.



GeognoSIS & GeognoSIS Express - *MINIMUM*

Operating system:	Windows® Server 2012 or above
Processor:	Intel® Xeon® E-2200 with 4 cores per processor or; AMD Epyc
Memory:	16 GB
Disk - Installation:	2 GB for software installation
Disk – Data:	100GB (dependent on local data storage)

GeognoSIS & GeognoSIS Express - *RECOMMENDED*

Operating system:	Windows® Server 2019 Standard Edition 64-bit
Processors:	2 x Intel® Xeon® Gold with 12 cores per processor or; AMD Epyc
Memory:	32 GB
Disk - Installation:	2 GB for software installation
Disk – Data:	100GB (dependent on local data storage)

Additional Information

- GeognoSIS is licensed per server. Cadcorp defines a server as 32 “logical processors” on a 32-bit operating system and 64 on a 64-bit operating system. The logical processor count is often the same as the number of cores, but can differ, for example, when Hyper-Threading is enabled, or on virtual machines (which have their own resource allocation models). If GeognoSIS is installed on a server with more than the number of supported logical processors, then GeognoSIS will automatically run on the first 32 or 64 that it finds. GeognoSIS can be assigned to specific logical processors if required.
- The numbers of proposed users of the GeognoSIS service together with the types of data served will ultimately determine the specification of the server. Users of multiple GeognoSIS or GeognoSIS Express instances may wish to dedicate processors to these instances.
- The use of slave instances for WMS, WMTS, WFS and HTTP service requests will require additional memory for each slave created.
- Additional local disk space may be required to store raster and other data for fast access by GeognoSIS. If you are intending to use tile caches (either pre-built or built over time from a WMTS tile service), these are best stored on the GeognoSIS server. The amount of space required will depend on the number of cached levels you are intending to use. Be aware that tile caches can take up considerable space on the server.

Using Virtual Machines

- If a Virtual Server is to be used for the deployment of GeognoSIS, there are specific licensing implications and Virtual Server setup requirements that need to be addressed.

Licensing for GeognoSIS on virtual machines is locked to the processors created by the virtual machine. You should build a virtual machine to match the processors for which you are licensed to run GeognoSIS.

- VMware allows logical processors and cores to be built, based on the host machine processor specification. A VMware server should be built to match the GeognoSIS licences; e.g. a single GeognoSIS licence can be run on a VMware server built with up to 32 or 64 logical processors and as many cores as allowed (determined by the host machine specification).
- Hyper-V creates logical cores without defining processors. In this case, GeognoSIS reads each logical core as a processor.